

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for enhanced synthesis of ~~biological macromolecules~~ polypeptides or polynucleotides *in vitro*, the method comprising:

~~synthesizing said biological macromolecules~~ polypeptides or polynucleotides in a reaction mix in the absence of an exogenous high energy phosphate source, wherein oxidative phosphorylation is activated in said reaction mix.

2. (canceled)

3. (currently amended) The method of ~~Claim 2~~ Claim 1 wherein said synthesis ~~also~~ comprises transcription of mRNA from a DNA template.

4. (currently amended) The method of ~~Claim 2~~ Claim 1, wherein synthesis of said polypeptides or polynucleotides is at least two fold higher than synthesis in the absence of said oxidative phosphorylation.

5. (currently amended) The method according to ~~Claim 2~~ Claim 1, wherein synthesis of said polypeptides or polynucleotides is at least three fold higher than synthesis in the absence of said oxidative phosphorylation.

6. (currently amended) The method of Claim 1 wherein said synthesis of ~~biological macromolecules~~ polypeptides or polynucleotides is performed as a batch reaction.

7. (currently amended) The method of Claim 1, wherein said synthesis of ~~biological macromolecules~~ polypeptides or polynucleotides is performed as a continuous reaction.

8-12. (canceled)

13. (currently amended) A method for *in vitro* synthesis of polypeptides in a reaction mix comprising a biological extract comprising components of polypeptide synthesis machinery, wherein such components are capable of expressing a nucleic acid encoding a desired polypeptide, ~~the improvement~~ the method comprising:

utilizing synthesizing said polypeptide in a reaction mix comprises comprising:

an extract from *E. coli* grown in glucose containing medium, ~~wherein said reaction mix comprises~~

magnesium at a concentration of from about 5 mM to about 20 mM;

and is substantially free of polyethylene glycol.

14- 21 (canceled)

22. (new) The method of Claim 13, wherein said synthesis further comprises transcription of mRNA from a DNA template.

23. (new) The method of Claim 13 wherein said synthesis is performed as a batch reaction.

24. (new) The method of Claim 13, wherein said synthesis of polypeptides is performed as a continuous reaction.

25. (new) The method of Claim 13, wherein said *E. coli* are grown in glucose and phosphate containing medium.

26. (new) The method according to Claim 13, wherein said reaction mix comprises one or more of spermine, spermidine and putrescine.